



## How Do You Make a Peanut Butter and Jelly Sandwich?

The question, “How do you make a peanut butter and jelly (PB&J) sandwich?” takes process back to its basic form: It is a popular question that has been asked by teachers and professors for years in an attempt to teach students how to document step-by-step instructions.

So, what is the process for making a PB&J sandwich?

- Take two slices of bread out of the bag.
- Place peanut butter on one slice of bread.
- Place jelly on the other slice of bread.
- Place the slice of bread with peanut butter on top of the slice of bread with jelly – condiment sides together.
- Eat the sandwich.

Details can be added, for example, instructions to take the twist tie off the bread bag, or indicate how much jelly to use, or how to spread, etc. Then there are the *exceptions, changes, or tailoring* of the process. Some people like their bread with the crust cut off. But when do you cut it off? Do you cut it off prior to or after the condiments have been added? Do you toast the bread? Then there is the ever-popular question, “How do you slice the sandwich prior to eating it – in halves or triangles?”

Buzzwords have been swirling around this thing called process for some time, including total quality management, continuous improvement, process improvement, International Organization for Standardization (ISO) 9000, Capability Maturity Model® (CMM®), Six-Sigma, and others. All have the same purpose – to make a higher quality product or service faster, better and cheaper. Being able to respond and adapt quickly to the needs and requests of those in the field is a necessity in our industry. The warfighter is our number one priority!

In the last decade, software developers have been asked to document their processes in a number of various ways, one of which is to become CMM Level 3. What exactly does that mean? Basically it certifies that the way the developer does business, whether it is production of systems or development of software, is repeatable, defined, of high quality, and measurable.

Section 804 of the Bob Stump National Defense Authorization Act for Fiscal Year 2003 mandates that government acquisition organizations begin process improvement efforts in-house. Section 804 requires the establishment of software *acquisition process improvement* (API) programs by those defense agencies that manage major defense acquisition programs with a substantial software component. The API requirements include the following:

- Documented processes.
- Appropriate metrics to verify performance and acquisition process improvement.
- Ensuring appropriate training or experience.
- Ensuring adherence to processes and requirements.

By starting a process improvement effort in-house, government acquisition organizations complement the efforts being accomplished by their Level 3 developers. Most government acquisition organizations do not produce systems or develop

software – they manage, monitor, and acquire these services from others.

To support organizations that *acquire* products/services, the Software Engineering Institute (SEI) created the Software Acquisition Capability Maturity Model (SA-CMM) to complement the CMM for Software (SW-CMM) and the Systems Engineering CMM (SE-CMM). The SA-CMM includes both systems and software and is a framework for improving acquisition processes, describing the *buyers* role. The model is used by senior management to set goals and to assess an organization’s maturity. Its use is appropriate throughout the entire product life cycle.

With the CMM Integration<sup>SM</sup> replacing the SW-CMM and SE-CMM, the office of the secretary of defense has requested that the SEI assist in developing a CMMI Acquisition Module.

Currently, this document is in draft form with pilots and a final version is due this year. The module does not have levels; instead, it concentrates on continuous process improvement rather than the need to acquire a level. The proposed CMMI Acquisition Module is based on the CMMI model, incorporating best practices from the SA-CMM, the Federal Aviation Administration’s i-CMM, Section 804, and other sources. It is streamlined (only 32 pages), easily implemented through self-assessments, and does not require an extensive infrastructure. The module focuses on effective acquisition activities and practices that are implemented by first-level acquisition projects.

Keep in mind, when you ask your child to write up the PB&J sandwich steps, it is his/her job to give you grief about it, and your job to embarrass him/her with a picture of him/her with peanut butter in the hair and jelly up the nose.

Remember, when your processes are documented and after you make your sandwich you get to enjoy it, but BYOPB (bring your own peanut butter).

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